

## CHANNEL OPTIMIZATION SYSTEM

### ABSTRACT OF THE DISCLOSURE

A channel optimization system for use with a communications channel and method of separating and encoding signals associated with the communications channel. In one embodiment, the channel optimization system includes an assorter that receives first and second signals having disparate transmission characteristics and selects one of the first and second signals. The channel optimization system also includes a translator, coupled to the assorter, that encodes the selected one of the first and second signals into a symbol representation as a function of a transmission characteristic associated therewith.